A decision-support system for cropland irrigation water management and agricultural nonpoint sources pollution control

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ABSTRACT

In this paper, an agricultural water and nonpoint sources pollution management decision support system (AWPM) was developed in Tongzhou district and Daxing district, Beijing, China, where is relatively developed in economical but has severe water-lacking and water quality problems. The AWPM provided a dynamic decision to managers on irrigation water management, and a decision scheme system on agricultural nonpoint sources pollution control from different perspective based on hydrological models and geographic information system in the study areas. The AWPM was designed a user-friendly interface, and the results adopted from AWPM can help managers make sound decision in the suburb of Beijing and similar areas.

Keywords: Decision-support system; Irrigation water management; Agricultural nonpoint sources pollution; Sustainable development

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